

**DRAFT**  
Subject to Field Testing

August, 2016

## FORAGE SUITABILITY GROUP - WESTERN OREGON

### MODERATELY WELL DRAINED > 15% Slope

**Number:** G-004AY015OR

**MLRA:** A4A Sitka Spruce Belt

**Climate:** Average annual precipitation ranges from 70 to 100 inches (178 to 254 centimeters). Precipitation occurs every month, is heaviest November through March, and relatively dry July and August. In most of this area, snow falls only a few days each year. Average annual temperatures vary from 51 to 53 degrees Fahrenheit (10.5 to 11.7 degrees Celsius). Average freeze-free-period is 209 to 216 days.

**Vegetation:** The native vegetation is generally an overstory of trees and an understory comprised of dense shrubs and herbaceous plants. Generally the following tree species occur: Sitka spruce, Western hemlock, and Douglas fir. The following plants may be found in the understory: huckleberry, salal, salmonberry, and both sword fern and deer fern among other annual and perennial herbaceous plants. Once cultivated for pasture or hay, the areas that have low level or no management, tend to show an increase in brushy species such as blackberry, Scotch broom, and gorse. Also tansy ragwort and St. Johnswort may increase on sites with low level or no management.

#### **Soil Suitability Group Description:**

**Soil Description:** These moderately well drained soils are generally deep, and are generally formed in alluvium. Textures are silt loams. Rooting depth is generally unrestricted.

**Landscape position:** Terraces

**Depth to seasonal water table:** varies from 24 to 36 inches (61 to 91 centimeters).

**Available Water Holding Capacity:** 7.9 inches (20 centimeters).

**pH range:** 3.6 - 5.5.

**Frequency and duration of flooding:** None.

**Frost heave potential:** None to low.

**Degree of stoniness:** None.

**Trafficability parameters:** Steeper slopes have a significant impact on trafficability. These soils lose strength when wet and driven on repeatedly.

**Typical soils:** Grindbrook and Walluski

**Adapted Forage Species List:**

**Grazing Use:**

Common Name	Scientific Name
Tall Fescue	Festuca arundinacea
Annual Ryegrass	Lolium multiflorum
Perennial Ryegrass	Lolium perenne
Alsike Clover	Trifolium hybridum
White Clover	Trifolium repens
Birdsfoot Trefoil	Lotus corniculatus

**Machine Harvest:**

Common Name	Scientific Name
Tall Fescue	Festuca arundinacea
Timothy	Phleum pratense
Alsike Clover	Trifolium repens
Birdsfoot Trefoil	Lotus corniculatus
White Clover	Trifolium repens

**Suggested seeding season:** Spring or Fall

**Production Estimates:** Based on Animal Unit Months, and high level of management

**Grazing Use:**

**Non-irrigated** - 9 to 13.5 AUMs/Acre/Year (@ 35% Harvest Efficiency – 100% of Growth Curve)

Base Production by Soil Fertility Level (Lbs./Acre/Year)

Very Low	Low	Moderate	High	Maximum
7040	9390	14080	21120	23460

**Machine Harvest:**

**Non-irrigated** - 4.5 Tons/Acre/Year (@ 70% Harvest Efficiency – 90% of Growth Curve)

Base Production by Soil Fertility Level (Lbs./Acre/Year)

Very Low	Low	Moderate	High	Maximum
4290	5710	8570	12860	14290

**Growth Curve: Pasture & Hayland - High Level Management**

Growth Curve Number: **4IMXHN**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	5	10	10	15	15	15	10	5	10	5	0

**Growth Curve: Pasture & Hayland - Medium Level Management**

Growth Curve Number: **4IMXMN**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

0	0	10	10	15	20	15	10	5	10	5	0
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**Growth Curve: Pasture & Hayland - Low Level Management**

Growth Curve Number: **4IMXLN**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	10	10	15	20	15	10	5	10	5	0

**Management:**

**Limitations:** Wetness generally limits the suitability of these soils for deep-rooted crops. Most crops on these soils are adversely affected by excess moisture. Excessive tillage can result in the formation of a tillage pan. Grazing and machine use should be restricted when soils are saturated. Grazing while soils are wet results in compaction of surface layer, poor tilth, and excessive runoff. Steepness of slope decreases livestock movement and affects machine movement.

**Vegetation Management:** Move livestock by plant height. Move livestock onto a field when forage is at least 6 to 8 inches tall. Discontinue grazing when the average height of the pasture is down to 2 to 4 inches. Avoid grazing when soil is wet and before pasture stand is fully established. Remaining stubble height is the more important of these two measurements.

**Season of use:** To avoid damage to plants and compaction of wet soils in the winter months caused by animals, any livestock on pasture should be removed when the soils are saturated, which generally occurs for long periods between November and March.

**Facilitating Practices:**

**Cross-fencing:** Cross fencing will help achieve higher forage yields and more uniform grazing use through more intensive management.

**Water developments:** Water is critical to livestock gains and general health. Generally, the best source of water in a field is a trough with water piped from a well or a spring. If piped water is not available, allow only restricted access to rivers or streams. If livestock only have a small access area for watering, the amount of manure and sediment in the water will be minimized. Additionally, bank erosion problems will be minimized, and streamside vegetation will be protected, which will keep the water cooler.

**Minerals:** Salt should be provided in the field for livestock. The salt block or box should be up off the ground and under cover so it will not dissolve by rain or dew. Salt should be placed away from watering areas to reduce livestock concentration areas and encourage more uniform grazing.

**Clipping and dragging:** Clip and drag pasture that have slopes less than 20% as often as required to encourage uniform grazing and pasture vigor. Clipping and dragging is best done after each grazing period and a minimum of twice annually.

**Fertilization:** Take soil samples to determine nutrient levels. An application of nitrogen in the spring is generally necessary for forage production, but tests have show that two applications one in fall and one in winter will optimize forage production. Fertilization will increase both the production and the nutritive value of the forage for livestock, but too

much fertilizer can build up toxic levels of certain minerals (such as nitrate and potassium) in forages.

**Weed control:** Weed control can be accomplished mechanically, chemically, biologically, or with a combination of these methods. The recommendations for chemicals can change, so it is always best to contact the local county extension office.

**Reseeding:** Reseeding should always be the last option. It is expensive, and takes a pasture out of production for most of a year. Additionally, the need to reseed is usually a symptom of a need to change livestock management practices. If management problems or a change in stocking rate or season of use are not addressed first, newly seeded pastures will soon look like the ones they replaced. Species selection is very important. If the species is not adapted to the site, the best seedbed preparation in the world will not make the seeding successful. Generally, a mix of one grass species and one legume is recommended. This cuts down on patch grazing of grasses caused by palatability differences. If multiple species are desired, make sure that the species of grass all have approximately the same growth schedule. It is very important to keep the animals off of a new seeding until well established. Otherwise, the new seedlings probably will be damaged or killed, and the time and money invested in the seeding will be wasted.